Amendments to the Claims

1. (Currently amended) A turbine engine comprising:

a compressor section;

a turbine section;

a circumferential array of combustion chamber conduits held for rotation about than engine axis, the conduits being downstream of the compressor section and upstream of the turbine section and having first and second ports; and

means for directing oxygen-containing gas from the compressor section to the combustion chamber conduits as the conduits rotate about the engine axis so as to cyclically:

feed a charge of said gas into each of the conduits through the first port of such conduit; and

permit discharge of products of combustion of said charge and a fuel through said first port and said second port.

2. (Original) The engine of claim 1 further comprising:

means for directing said products of combustion of said charge from said first port and said second port to said turbine section and mixing said products with a flow from the compressor bypassing the combustion chamber conduits so as to present the turbine section with a circumferentially uniform flow.

3. (Currently amended) The engine of claim 1 wherein:

~~the circumferential array of combustion chamber conduits is rotating about an engine axis; and~~

the means for directing comprises at least a first portion non-rotating about the engine axis.

4. (Currently amended) The engine of claim 3 wherein said turbine and compressor sections each comprise high and low stages on respective high speed and low speed spools and the circumferential array of combustion chamber conduits is on a free spool.

5. (Original) The engine of claim 4 wherein a final stage of the compressor section is on said free spool.

6. (Original) The engine of claim 3 wherein the array is on a free spool and rotation of the array is driven by partially tangential direction of the products of combustion.

7. (Original) The engine of claim 1 wherein there is a first airflow substantially through said compressor and turbine sections and wherein a first portion of the first airflow passes through the combustion chamber conduits in the charges and a second portion of the first airflow bypasses combustion and a mass flow ratio of the first portion to the second portion is between 1:1 and 1:3.

8. (Original) The engine of claim 7 wherein the engine is a turbofan and the first airflow is a core airflow and a bypass airflow bypasses the compressor and turbine sections.

9. (Original) The engine of claim 1 wherein said combustion comprises detonation.

10. (Original) The engine of claim 1 further comprising a plurality of igniters, each of which is positioned relative to an associated one of the conduits to ignite the combustion of the charge in said associated conduit.

11. (Currently amended) A turbofan engine comprising:

a fan;

a compressor having;

a turbine coaxial with the compressor along an axis and driving the compressor and fan;

a pulsed combustion combustor receiving air from the compressor and outputting combustion gasses to the turbine and having:

a plurality of combustion chamber conduits each extending along a length between first and second ends and having an outboard portion proximate the first end and

an inboard portion ~~potion~~ proximate the second end and held for rotation about the axis through a plurality of positions, including:

at least one charge-receiving position for receiving a charge from upstream;

at least one initiation position for initiating combustion of the charge; and

at least one discharge position for downstream discharging of products of combustion of said charge.

12. (Original) The engine of claim 11 wherein:

the charge is received through the outboard portion and partially passes therefrom into the inboard portion; and

the combustion products are discharged partially through the first end and partially through the second end.

13. (Original) The engine of claim 11 wherein:

the inboard portion has a partially tangential orientation at the second end.

14. (Original) The engine of claim 11 further comprising at least one fuel injector for injecting fuel into air from the compressor to form the charges.

15. (Original) The engine of claim 11 further comprising at least one ring of foils rotating with the conduits as a unit.

16. (Original) A pulsed combustion device comprising:

first means for receiving an air flow moving at least partially in a first axial direction and redirecting the flow to move at least partially in a second axial direction, opposite said first axial direction; and

a combustor assembly comprising:

a plurality of combustion conduits in a circumferential array, the array rotatable about the axis relative to at least a portion of the first means, each of said conduits

having:

a first port; and

a second port, the first port cyclically receiving a charge of said airflow and a fuel and the first and second ports cyclically discharging combustion products of the charge; and

at least one ignition means positioned to initiate said combustion.

17. (Original) The device of claim 16 in a turbine engine further comprising:

a compressor upstream of the pulsed combustion device; and

a turbine downstream of the pulsed combustion device.

18. (New) The engine of claim 1 wherein:

said charge of said gas is fed into each of the conduits through the first port of such conduit with said fuel and not through the second port.

19. (New) A turbine engine comprising:

a compressor section;

a turbine section;

a circumferential array of combustion chamber conduits, the conduits being downstream of the compressor section and upstream of the turbine section and having first and second ports; and

means for directing oxygen-containing gas from the compressor section to the combustion chamber conduits so as to cyclically:

feed a charge of said gas into each of the conduits forwardly through the first port of such conduit; and

permit discharge of products of combustion of said charge and a fuel rearwardly through both said first port and said second port.

20. (New) A turbine engine comprising:

a compressor section;

a turbine section;

a circumferential array of combustion chamber conduits rotating about an engine axis, the conduits being downstream of the compressor section and upstream of the turbine section and having first and second ports; and

means for directing oxygen-containing gas from the compressor section to the combustion chamber conduits so as to cyclically:

feed a charge of said gas into each of the conduits through the first port of such conduit; and

permit discharge of products of combustion of said charge and a fuel through said first port and said second port,

the means for directing comprising at least a first portion non-rotating about the engine axis

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21. (New) The engine of claim 20 wherein said turbine and compressor sections each comprise high and low stages on respective high speed and low speed spools and the circumferential array of combustion chamber conduits is on a free spool.

22. (New) The engine of claim 21 wherein a final stage of the compressor section is on said free spool.

23. (New) The engine of claim 20 wherein the array is on a free spool and rotation of the array is driven by partially tangential direction of the products of combustion.

24. (New) A turbine engine comprising:

a compressor section;

a turbine section;

a circumferential array of combustion chamber conduits, the conduits being downstream of the compressor section and upstream of the turbine section and having first and second ports; and

means for directing oxygen-containing gas from the compressor section to the combustion chamber conduits so as to cyclically:

feed a charge of said gas into each of the conduits through the first port of such conduit; and

permit discharge of products of combustion of said charge and a fuel through said first port and said second port, said combustion comprising detonation.